Effort Indices for National Family Planning Programs, 1999 Cycle

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ABSTRACT

Since 1972 indices to measure effort by large-scale family planning programs have been measured periodically. The fifth cycle, in 1999, found a higher average score for all countries than five years ago, at the time of the Cairo conference. Countries with initially low scores have improved considerably more than others and have moved sharply upward over the years to approach these with initially high scores. The profiles of effort over 30 program features differ sharply between strong and weak programs; the latter fall below the former on every score. All countries, regardless of their average score, are selective in the features they stress, but weak programs are more erratic in their selectivity than strong programs. The strongest programs have stabilized at about 80 percent of the maximum score; the all-country average is about two-thirds of that standard. In addition, the international picture is more favorable when country scores are weighted by population size: over two-thirds of people in the developing world live in countries with relatively high scores. Nevertheless, a substantial gap persists between the performance of most individual programs and the 80 percent level. Prevalence of contraceptive use continues to be highest under the combination of favorable social settings and strong programs.

Effort Indices for National Family Planning Programs, 1999 Cycle

Here we provide results from the latest cycle of the Family Planning Program Effort Index, based upon reports from 89 countries. The index measures 30 features of program effort that are meant to capture inputs, independent of such outputs as contraceptive use or fertility change. This permits an examination of the relation of outcomes to effort, both levels and types, since 30 different features are included in the index. These are also useful for diagnosis of program weaknesses and for signs of improvement over time. Two countries, Vietnam and Egypt, (San et al. 1999; Khalifa, Suliman, and Ross, 1999) have adapted the scores to gauge provincial differences in effort and to provide leads for administrative changes.

The scores come from replies to about 125 items on a questionnaire that is completed by a small number of expert respondents for each country. These respondents do not know which items produce which of the 30 scores, nor do they know the weights involved in converting items to scores, each of which ranges from zero to four. The conversion rules were codified in 1982; they and all other aspects of the methodology have been retained since then to protect the accuracy of time trends(1). Estimates are now available from five cycles over the 27 years from 1972 through 1999. The 30 items that compose the total score are organized into four components, pertaining to policy positions, service arrangements, evaluation, and availability of family planning methods.

Literature

Earlier reports have summarized the extensive historical literature since 1974 on this index; here we discuss only items that appeared in the last 5-8 years. The scores have been used extensively to test how program effort interacts with the socioeconomic setting to increase contraceptive use and lower fertility; by far most of that work has been cross-sectional. However time series analyses have been made possible by the accumulation of score cycles over the decades, and these are offered by Tsui (1997, 1998) who finds appreciable program effect on fertility under controls for numerous social and economic factors. She also reviews a good deal of the technical discussion bearing on such calculations, including writings by Ahlburg and Diamond (1996), and those of Schultz (1993, 1994), a skeptic. Several of the methods employed over the years are illustrated in Ross (1997), as well as in an earlier paper by Ross and Lloyd (1992).

In an exploration of program effects upon fertility, Bongaarts (1997) expanded upon his analysis of the issues raised by Pritchett (1994), and stressed that much disagreement concerning program effects disappears when they are weighted by population size (in which case the higher scores for some large countries raise the means). Additionally, some program effects that seem modest assumed that the scores would experience no further improvement after 1982, whereas in fact they have improved substantially since then, from an average of 29 to 54 (percent of maximum). The relative importance of program effects upon wanted and unwanted fertility are also considered in detail. Knowles, Akin, and Guilkey (1994) argued that Pritchett's essential conclusions were invalid because they were grounded in a tautological model. Pritchett (1994) however insisted upon his original formulations. In any case, in the years since those exchanges were prepared and since the data they used were gathered, program effort has continued to strengthen, with effects that probably exceed the levels conceded by Pritchett and employed by Bongaarts, especially in countries where general modernization has lagged.

Program effects on fertility continue to be an important public policy issue, but technical methods are sufficiently complex that each analyst must be selective, and none is known to have reversed a position once taken regarding the usefulness of the programs. Other analysts have long since shifted their attention away from any yes-no question to examine instead the ways in which programs make their contributions and how those can be enhanced.

Other notable work includes the outpouring of documents under the six-year "EVALUATION" project. These have included a major review of findings on how selected family planning programs have worked, and on the methodological character of some 14 methods used in such research (Samara, Buckner, and Tsui, 1996.) A handbook of indicators for program evaluation was published (Bertrand, Magnani, and Knowles, 1994), and a guide to an extensive set of evaluation methods (Buckner et al., 1995). A set of three monographs was produced to review the literature on what programs do or fail to do to affect reproductive preferences (Freedman 1997); on what programs do to raise contraceptive use (Guilkey 1998); and on what programs do to reduce fertility rates (Hermalin 1996). To examine future sustainability issues, international data were used to create two scales, based partly upon the program effort scores, to estimate the sustainability of national family planning programs and of the fertility transition for most developing countries (Knight and Tsui, 1997). Further, a remarkable series of five monographs was issued to provide indicators for family planning and reproductive health topics: for adolescents, safe pregnancy, women's nutrition, breastfeeding, and STD/HIV (EVALUATION Project, 1995). Finally, in collaboration with the Population Reference Bureau, tabular data for monitoring national family planning programs were published as a wall chart, presenting selected effort scores along with numbers of facilities and personnel, staff/population ratios, service types, and per capita funding levels (PRB, 1996). This unparalleled body of work, produced over a six-

year period, captures much of the literature of program evaluation and makes innovative use of the family planning effort indices of concern here.

Another analysis of importance, by Bulatao (1996), applies factor analysis methods to the series of scores from 1982-1994, to identify six common components among the 30 individual items. He finds a rather consistent structure across the years, and builds on this to identify fourteen clusters of countries. He reviews earlier efforts along similar lines and notes differences in their results.

Methodology

The detailed questionnaire was prepared in English and translated into French, Spanish, and Russian. In each cycle since 1982 it has been sent to four types of respondents: (1) government officials directly involved in the implementation of the program, (2) donor personnel close to the program in such agencies as the United Nations Population Fund (UNFPA), the World Bank, USAID, and various non-governmental organizations including some IPPF affiliates, (3) citizens in the various countries who are familiar with the program but not involved in policy or management, and (4) foreigners who are closely familiar with the program. Replies have been received from 359-433 respondents in about 95 countries depending upon the year; in 1999, 374 replies were received, with a range of one to 12 and an average of about four per country. All questionnaires were computerized, with automatic conversion of items to the 30 scores by a complex set of codes. To reconcile scores from different respondents in the same country the mean values were used, with highly improbable outliers deleted. Reports on the previous cycles, cited above, provide details on methodology that are not repeated here.

As noted each of the 30 features is scored from zero to four, giving a maximum of 120. The four components vary in their number of items: 8, 13, 4, and 6 for policy, services, evaluation, and method availability, so their maximums are 32, 52, 12, and 24. For ease of comparison most results below are given as the percent of maximum. The 30 items follow, grouped into the four components mentioned above -- policy, service, evaluation, and availability of methods. Appendix A gives a brief description of each item.

Policy and stage-setting activities

1 Policy on fertility reduction and family planning
2 Statements by leaders
3 Level of program leadership
4 Policy on age at marriage
5 Import laws and legal regulations
6 Advertising of contraceptives allowed
7 Involvement of other ministries and public agencies
8 Percent of in-country funding of family planning budget

Service and service-related activities

9 Involvement of private-sector agencies and groups
10 Civil bureaucracy involved
11 Community-based distribution
12 Social marketing
13 Postpartum program
14 Home-visiting workers
15 Administrative structure
16 Training program
17 Personnel carry out assigned tasks
18 Logistics and transport
19 Supervision system
20 Mass media for IE&C
21 Incentives and disincentives

Evaluation and record keeping

22 Record keeping
23 Evaluation
24 Management's use of evaluation findings

Availability and accessibility of fertility-control supplies and services

25 Male sterilization
26 Female sterilization
27 Pills and injectables
28 Condoms, spermicides
29 IUDs
30 Abortion/menstrual regulation

Regional Patterns

The program effort scores in 1999 for all 89 countries are presented in Table 1, which shows the scores by the four components as well as the total, all as a percent of maximum. The range is from no effort at zero to 100 at full effort. The actual range for the total score is from a low of 29 to a high of 86. Six countries have total scores of 75 or above: China, Indonesia, Taiwan, Vietnam, Thailand, and Mexico, all of which are generally recognized for the strength of their family planning programs. These six, and others at the upper end of the range, generally score well on all four components. At the lower end of the range seven countries have total scores of 35 or below: Sudan, Congo, Gabon, Uruguay, Costa Rica, Argentina, and Venezuela. Most of these countries scored well on at least one component but very poorly on others.

The regional averages are shown by component in Figure 1. The widest variation in scores clearly occurs in method availability. The range is only 15-20 points for the components of policy, services and evaluation, but over 50 points separate the lowest region (Francophone Africa) from the highest region (East Asia) in method availability. Most regions now have policies in place and have programs with important elements of service delivery and evaluation. However, the

implementation of these programs, to actually deliver methods to the population, sharply differentiates the high-effort countries from the low-effort ones. A relatively full choice of methods is available to those living in most East Asia countries, while many programs in sub-Saharan Africa provide less choice and reach only certain segments of the population.

Profiles

In previous rounds, programs have been classified into four broad categories of effort on the basis of the total score, as shown below:

Program-effort level	Total score	Percent of maximum
Strong	80+	67+
Moderate	55-79	46-66
Weak	25-54	21-45
Very weak/none	0-24	0-20

According to this classification, programs in 13 countries are “strong”, programs in 53 countries are “moderate” and 23 are “weak”. No countries were classified as “very weak/none” in 1999. Although these categories are somewhat arbitrary, they do separate programs into very different types. Figure 2 shows the average scores on all 30 items for the stronger programs (those 66 programs classified as “strong” and “moderate”) and the weaker programs (those 23 countries classified as “weak”). The items within each component are ordered by the scores of the stronger countries. The average scores for the stronger countries are higher than those for the weaker countries in every one of the thirty items. Furthermore, the gap between the stronger and weaker countries is roughly consistent with only a few exceptions (marriage age policy and abortion

availability). As a group, the weaker countries need to improve across most items in order to move into the stronger categories.

The weaker programs exert less effort, and they do so more erratically than the stronger programs do. This appears visually in Figure 2, but it is confirmed by the standard deviations across the scores (not shown), which are considerably greater for the weaker than the stronger programs. That is, around their own lower level of effort the weaker programs are more selective in what they focus upon. Stronger programs are less selective, exerting effort somewhat more consistently.

Although the scores for the stronger countries are higher than those for the weaker countries, and the weaker profiles contain greater variation, the profiles are roughly similar. In Policy and Stage-setting Activities, most countries in both groups score higher on items related to policies in place than they do on leadership levels or on budget support, and policies on age at marriage are judged to be very weak. In Services and Service-related Activities, there is a continuum from some activities that are highly rated in both groups, such as completion of assigned tasks and training, to those that are rated low, such as involvement of the civil bureaucracy, CBD, home-visiting workers, and the use of incentives and disincentives. For Method Availability, condoms, pills, and IUDs are judged to be more available than sterilization and abortion. Male sterilization is clearly the least available method in both strong and weak groups. The major exception is abortion services, which score considerably higher in relation to the other methods in the weaker countries than in the stronger countries.

Time Trends

In the five years from 1994 to 1999 the global average rose once again for family planning program effort (Appendix B, last line). The rise of six percentage points, from 48 percent to 54 percent of maximum, is an increase of one-eighth over the 1994 level, a substantial change. This is about twice the change from 1989 to 1994, but much less than the very large seven-year jump from 1982 to 1989. So far there is no overall tendency to plateau, although some individual countries have done so while others have continued to improve their scores.

Country distributions by strength of effort, over time, appear in Figure 3. When program effort was first assessed in 1972 a large number of countries had no programs or policies at all and received scores of zero, so effort in over 60 countries was classified as very weak/none. Over the years more and more countries have instituted policies and programs and worked to improve them. By 1982 there were fewer countries in the "very weak/none" category although still more than in any other category. By 1989 and 1994 most countries had moved out of the lowest category and joined the weak or moderate categories. Between 1994 and 1999 the weak group lost members to the moderate group, so that by 1999 the largest number of countries is found in the "moderate" category. There has been very little change over the years in the number of countries classified as having strong programs, but the transition in the number of countries classified as very weak/none, weak, and moderate has been striking. By 1999, no countries are classified as very weak/none and only 19 are weak.

The picture is different on a population basis, and more favorable. Giving each country its weight by population (Table 2) shows the strong category to be always largest because of the presence of China. While in 1972 only 36 percent of the population in surveyed countries lived in countries listed as strong, by 1982 that had increased to 62 percent and by 1999 to 68 percent (2).

Table 2. Population living in countries by strength categories, 1972, 1972, 1989, 1994, and 1999 (millions)

	1972	1982	1989	1994	1999
Strength Group					
Very weak/none	695	450	137	18	0
Weak	186	502	507	663	259
Moderate	838	295	629	724	1,132
Strong	961	2,067	2,260	2,748	3,018
Very weak/none	26%	14%	4%	<1%	0%
Weak	7%	15%	14%	16%	6%
Moderate	31%	9%	18%	17%	26%
Strong	36%	62%	64%	66%	68%
Total Percent	100%	100%	100%	100%	100%

Still another approach to the trend pattern appears in Figure 4. It keeps all countries together according to their classification in 1972. The average score for countries classified as “strong” in 1972 dropped by 1982 but then only slightly to 62 (top line). Those classified as “moderate” in 1972 have since increased their average score somewhat from 53 to 62. The largest changes can be seen in those countries originally classified as “weak” or “very weak/none”. They increased their scores dramatically over these 27 years to within 10 points of the higher categories. The average score for all countries increased from 20 in 1972 to 55 in 1999. (When countries are weighted by population, the average score has increased from 52 to 68.) The dominant trend has been for the weak group to rise toward the strong group. By 1972 the strong group was already at a high level and has remained there over the past 27 years.

Trends in program effort are shown by component and region in Figure 5. These charts show a consistent pattern of change. East Asia has had the highest scores in all categories but experienced a decline in 1999 in all categories except method availability. That decline is largely due to small declines in the scores for China and large declines in the scores for the Republic of

Korea. Since this region only has 4-6 countries in it, depending on the year, the averages are more susceptible to variations in one or two individual country scores than in the other regions. South and Southeast Asia has shown steady improvement over the years so that by 1999 it matches or exceeds East Asia in policies and services, though not in method availability. Large improvements are seen in North Africa and the Middle East as well as in sub-Saharan Africa. Latin America showed improvement from 1972 to 1982 but the scores have been more or less stable since then. Note that there, as in all other regions, the averages conceal major differences among countries.

The pattern of change over time has been different by region. South and South East Asia has shown uniform improvement since 1972 in all four categories with the greatest improvement in method availability. This can be seen in Figure 6, a star chart that shows the average score on each of the four categories for each year. (Each line represents a year. The movement of the lines towards the outer boundary represents improvement towards the maximum score.) By contrast, the pattern for sub-Saharan Africa also shows steady improvement in all four areas but there is significantly less growth in method availability than in the other three components. Many of the policies, structures, and programs have been put in place but the implementation is still weak. Bulatao (1996) has used similar star charts quite extensively to show changes over time by special components of the scores derived by factor analyses.

Program Effort by Social Setting

The effort scores were used in the 1970s, and repeatedly thereafter, to examine the relationship between social and economic development, family planning effort, and fertility decline or contraceptive use (two prominent early studies were Freedman and Berelson 1976, and Mauldin and Berelson, 1978). Such studies have generally found that program effort and social setting

both play an important, and roughly equal, role in fertility decline. Table 3 presents a view of this relationship for the 1999 scores for contraceptive use. Countries are classified by strength of program effort in the columns and by social setting in the rows. As in earlier analyses, starting from Mauldin and Berelson (1978), the social setting categories are based on an index composed of seven variables: percent adult literacy, primary and secondary enrollment ratio, life expectancy at birth, infant mortality rate, percent of male labor force not in agriculture, gross national product per capita, and percent urban population. Countries are ranked on each variable, and the final score is the sum of the ranks divided by seven. Countries are then grouped into quartiles to produce the categories shown in Table 3. (The pattern would be similar with the Human Development Index, which is based upon three of the seven items, for longevity, educational attainment, and a measure of GNP per capita.) Countries are also divided into quartiles by the average program effort scores for 1994 and 1999. The cell value for each country is contraceptive prevalence in the latest survey year.

The row and column averages reflect the dependence of contraceptive use upon both social setting and program effort. First, there is a strong association between prevalence and social setting: the average prevalence for the countries with high social setting is 65, and this declines to 53, 36, and 16 as social setting declines to upper middle, lower middle, and low, respectively. A similar pattern exists with program effort: prevalence falls off from 60 in high-effort countries to only 45 and then to 28 and 29 for the lower-effort countries. The gradient is sharper, over a greater range, for social setting than for program effort. Highest prevalence occurs where both are high, as in the upper left cell of the table.

That cross-tabulation analysis is supported by an ordinary least squares multiple regression of social setting and family planning effort on prevalence, which confirms that both variables are significant predictors of prevalence (3). Thus the 1999 scores confirm earlier findings that family

planning program effort, as measured by this index, makes an important contribution to the contraceptive practice independent of social setting.

Discussion

Globally, family planning effort continued to strengthen during the last five years, improving by about one-eighth over the 1994 level. However this brings the average country score to only 54 percent of maximum, which leaves a great deal of room for further improvement. Nevertheless the strongest programs have never risen much above 80 percent of maximum, which raises the question of what can reasonably be expected. Against the standard of 80 percent, the 54 percent in 1999 represents two-thirds of what could ever develop in the effort scores. Moreover, on a population basis, the picture is more favorable, since most of the developing world's population lives under programs in the stronger categories.

Over the decades it is the weakest programs that have changed the most, going far to close the immense gap between them and the strongest ones, which were already at a high and stable level by 1972. Even at that level there remains considerably selectivity in what programs focus upon, or at least what they receive high scores on. It may be inherently easier to score high on some features than others, given the conversion rules from the questionnaire items. In addition, not all strong programs take the same paths; the routes to marked accomplishments vary in their nature and intensity. Nevertheless such programs continue to contribute to rising contraceptive use independently of social setting improvements.

The upward movement in effort since the Cairo conference of 1994 could not have been confidently predicted, not only because of the strong urging there that effort should be broadened beyond any close program focus upon contraception, but also because numerous countries had

experienced fertility declines that might have tempted them to relax their policies and programs. The Republic of Korea did register a large drop in its overall score, and Taiwan has changed its anti-natalist policy. China has perhaps liberalized some aspects of its aggressive program, which may be reflected in its lower score in this cycle. Singapore and Malaysia revised their policies in the past, and India in 1996 fundamentally revised its target system, essentially canceling method-specific worker quotas.

The Cairo mandates are to some extent being monitored internationally, not only for donor funding which has been disappointing (Vlassoff, Exterkate, and Eelens, 1998), but for conditions in the countries themselves. Surveys are adding systematically to time trends for unmet need and intention to use contraception, and estimates for maternal mortality are being refined. Three other activities related to Cairo priorities are underway (Futures Group, 1998, 1999, and 1996): For maternal and neonatal health, levels and types of program efforts are being measured in some 51 countries including China and 15 Indian states. For HIV/AIDS, program efforts are being measured for some 43 countries. For multiple features of reproductive health, a five-part instrument has been implemented in several countries to obtain a "Policy Environment Score (PES)," to gauge strength at the policy level for family planning, safe motherhood, safe abortion, adolescent health, and HIV/AIDS. Over the next two years the combination of fuller information on funding, continued survey information on both family planning and health, and studies directed at specific elements of reproductive health, should clarify the state of post-Cairo achievements.

Table 1. Program Effort Scores by Component and Region as Percent of Maximum, 1999						
Region/Country		**Policy**	**Services**	**Evaluation**	**Method Availability**	**Total Score**
East Asia						
	China	89	87	70	88	86
	Korea, Rep	45	39	63	97	55
	Mongolia	31	35	26	58	38
	Taiwan	74	67	96	100	79
Subtotal		60	57	64	86	64
South and Southeast Asia						
	Bangladesh	70	75	72	81	74
	Cambodia	56	45	50	32	46
	Hong Kong	63	41	32	100	57
	India	72	58	60	72	65
	Indonesia	84	86	81	72	82
	Laos	51	41	36	18	39
	Malaysia	72	61	86	72	69
	Myanmar	34	38	59	27	37
	Nepal	61	56	67	49	57
	Pakistan	59	57	52	57	57
	Philippines	56	50	66	67	57
	Singapore	41	44	29	54	44
	Sri Lanka	67	71	49	76	69
	Thailand	61	72	95	89	75
	Vietnam	82	74	66	79	76
Subtotal		62	58	60	63	60
North Africa and Middle East						
	Algeria	81	55	100	60	68
	Egypt	63	58	60	46	57
	Iran	70	62	68	94	71
	Jordan	47	45	53	48	47
	Lebanon	49	63	74	61	60
	Morocco	57	51	76	61	57
	Oman	41	45	59	81	53
	Syria	52	74	88	56	66
	Tunisia	80	71	88	52	71
	Turkey	71	44	61	76	59
	Yemen	56	27	33	36	37
Subtotal		61	54	69	61	59
Anglophone Africa						
	Ethiopia	48	49	43	28	44
	Ghana	68	61	72	58	63

Table 1. Program Effort Scores by Component and Region as Percent of Maximum, 1999						
Region/Country		**Policy**	**Services**	**Evaluation**	**Method Availability**	**Total Score**
	Kenya	55	64	63	67	62
	Lesotho	62	58	77	61	62
	Malawi	57	58	53	23	50
	Mauritius	67	67	91	75	71
	Mozambique	49	37	52	40	43
	Namibia	66	30	63	84	54
	Nigeria	47	49	38	38	45
	South Africa	62	45	46	65	54
	Sudan	41	40	39	12	35
	Tanzania	64	65	46	27	55
	Uganda	62	57	60	34	54
	Zambia	42	57	62	39	50
	Zimbabwe	61	63	79	49	61
Subtotal		57	53	59	47	54
Francophone Africa						
	Benin	46	48	54	30	45
	Burkina Faso	58	59	60	33	54
	Cameroon	53	52	54	10	44
	Central African Rep	66	57	50	13	50
	Chad	67	44	52	4	43
	Congo	56	26	29	27	35
	Cote d'Ivoire	56	52	71	27	50
	Gabon	27	37	40	40	35
	Guinea	61	64	63	48	60
	Madagascar	44	48	44	26	42
	Mali	55	70	73	31	58
	Mauritania	35	39	55	25	37
	Niger	59	50	61	16	47
	Rwanda	77	60	66	44	62
	Senegal	58	54	64	46	55
	Togo	64	67	75	45	63
Subtotal		55	52	57	29	49
Latin America						
	Argentina	33	21	36	40	30
	Bolivia	46	44	45	64	49
	Brazil	50	46	59	100	59
	Chile	50	56	60	86	61
	Colombia	44	66	78	80	64
	Costa Rica	38	21	19	57	32
	Dominican Republic	43	52	44	58	50
	Ecuador	47	43	47	50	46
	El Salvador	49	45	41	46	46
	Guatemala	35	32	35	51	37
	Guyana	42	44	56	51	46

Table 1. Program Effort Scores by Component and Region as Percent of Maximum, 1999						
Region/Country		**Policy**	**Services**	**Evaluation**	**Method Availability**	**Total Score**
	Haiti	59	50	39	51	51
	Honduras	43	41	40	52	44
	Jamaica	71	59	63	58	62
	Mexico	79	62	84	90	75
	Nicaragua	35	53	60	55	49
	Panama	61	34	60	61	49
	Paraguay	56	43	59	81	56
	Peru	65	42	60	85	59
	Puerto Rico	49	53	66	97	62
	Trinidad & Tobago	55	59	62	63	59
	Uruguay	22	30	54	47	34
	Venezuela	32	12	13	71	29
Subtotal		48	44	51	65	50
Central Asian Republics						
	Kazakstan	36	42	38	51	42
	Kyrgyzstan	45	43	54	64	49
	Tajikistan	58	48	68	55	54
	Turkmenistan	49	59	65	68	59
	Uzbekistan	69	48	41	60	55
Subtotal		51	48	53	60	52
Grand average		55	51	58	55	54

Table 3. Contraceptive prevalence by category of family planning effort and social setting

SOCIAL SETTING	HIGH		UPPER MIDDLE		LOWER MIDDLE		LOW		ROW AVERAGE
	Hong Kong	86	Brazil	77			United Arab Emirates	28	
HIGH	Korea, Rep.	77	Panama	58			Kuwait	35	
	Jamaica	66	Singapore	65			Kazakstan	59	
	Colombia	72	Trinidad and Tobago	53			Costa Rica	75	
	Cuba	69	Uzbekistan	68					
	Mauritius	75	Puerto Rico	78					
	Mexico	65							
	Average	73	Average	67			Average	49	65
	Syria	40	Nicaragua	60	Kyrgyzstan	60	Iraq	18	
UPPER	Iran	73	El Salvador	60	Jordan	53	Mongolia	57	
MIDDLE	Sri Lanka	66	South Africa	53	Paraguay	51			
	Thailand	72	Algeria	47	Honduras	50			
	Tunisia	60	Turkey	64	Oman	24			
			Egypt	55	Namibia	29			
			Philippines	46	Ecuador	57			
			Dominican Republic	64					
			Peru	64					
	Average	62	Average	57	Average	54	Average	38	53
	Morocco	59	Senegal	13	Cote d'Ivoire	11	Papua New Guinea	26	
LOWER	Zimbabwe	48	Lesotho	23	Nigeria	15	Congo	8	
MIDDLE	Botswana	33	Pakistan	18	Zambia	26	Myanmar	33	
	India	41	Ghana	20	Cameroon	19	Gabon	75	
	Vietnam	75	Kenya	39	Guatemala	31	Mauritania		
	Indonesia	57			Bolivia	48			
	China	83							
	Average	57	Average	23	Average	25	Average	36	36
	Rwanda	21	Tanzania	18	Ethiopia	4	Sudan	10	

Table 3. Contraceptive prevalence by category of family planning effort and social setting

SOCIAL SETTING	HIGH		UPPER MIDDLE		LOWER MIDDLE		LOW		ROW AVERAGE
LOW	Togo	24	Mali	7	Benin	16	Laos	25	
	Bangladesh	49	Nepal	29	Haiti	18	Yemen	21	
			Guinea	2	Central African Republic	15	Chad	4	
					Niger	8	Cambodia	13	
					Malawi	22	Bhutan	8	
					Uganda	15	Madagascar	19	
					Burkina Faso	8	Mozambique	6	
	Average	31	Average	14	Average	13	Average	13	16
COLUMN AVERAGE		60		45		28		29	**41**

Figure 1. Program Effort Scores by Component and Region, 1999

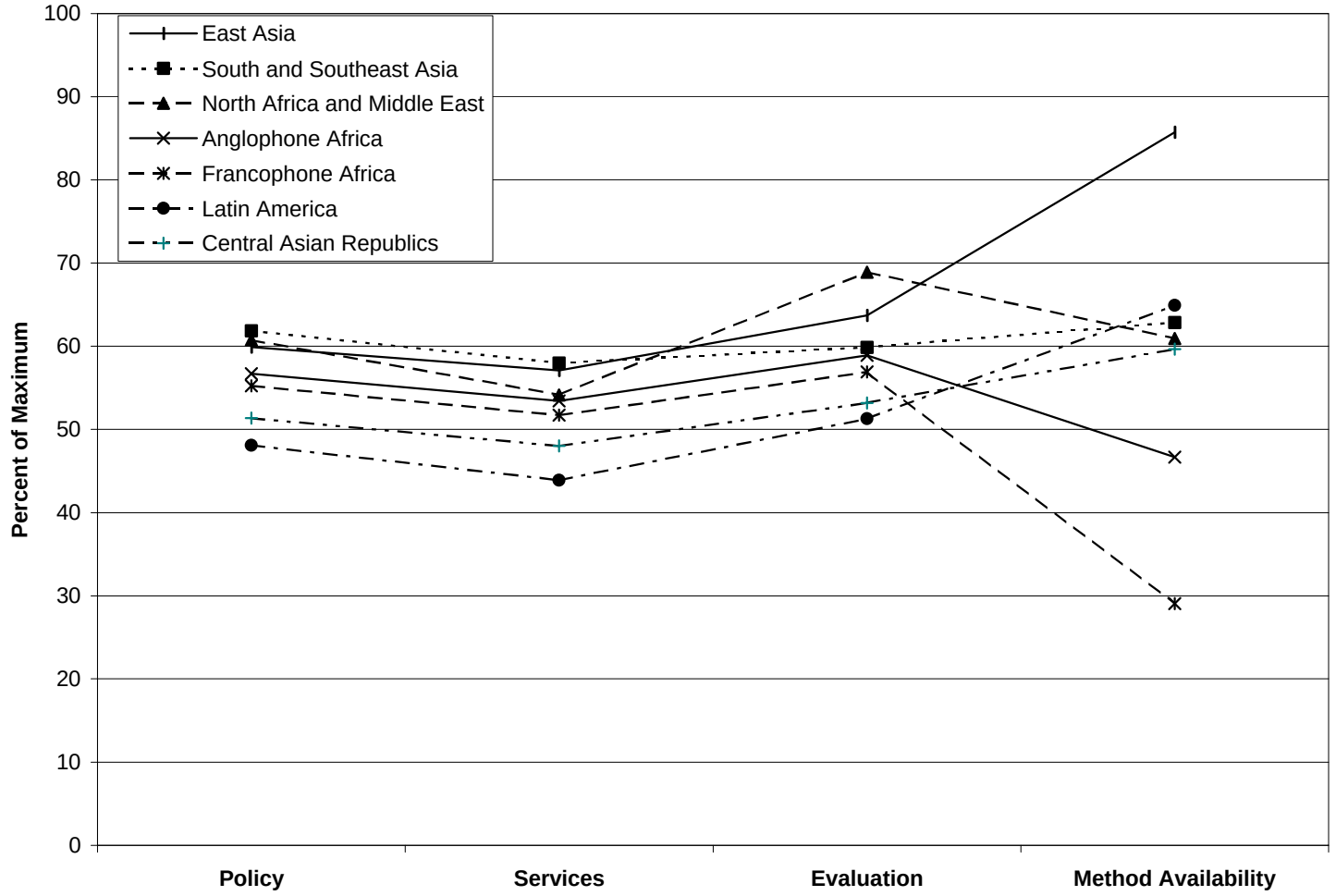


Figure 2. Thirty Program Effort Scores, Stronger vs. Weaker Programs, 1999

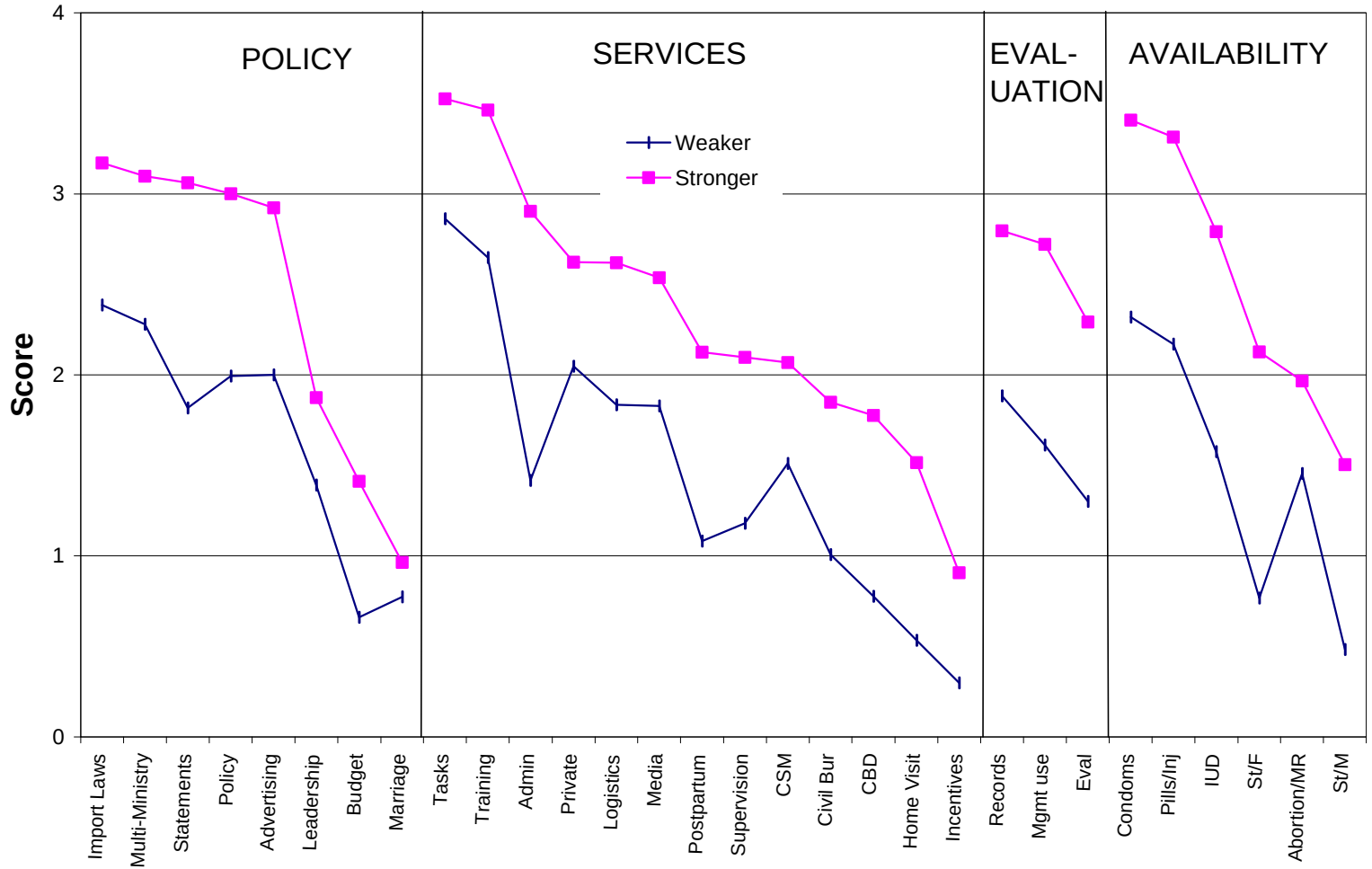


Figure 3. Distribution of Countries by Strength Categories, 1972-1999

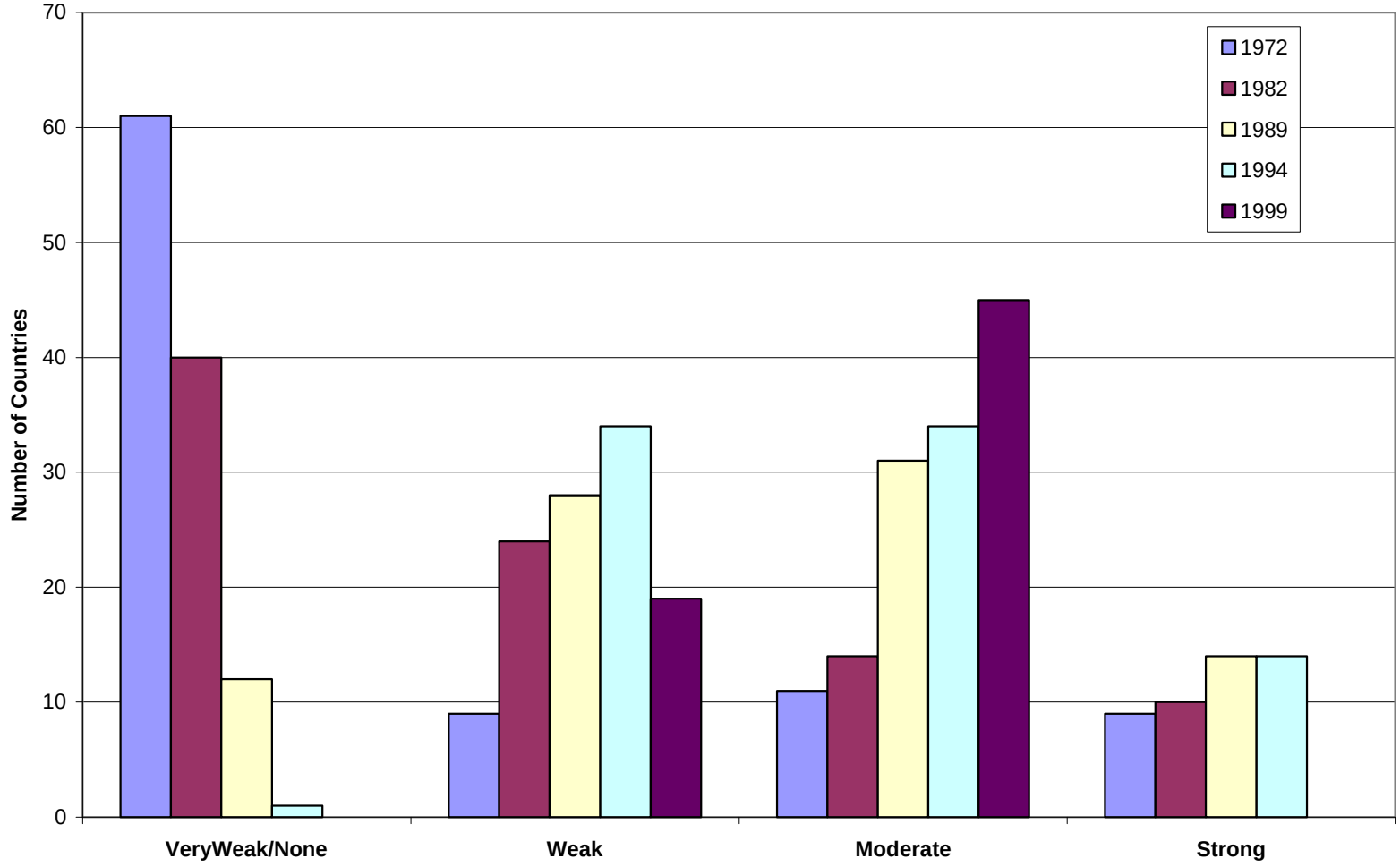


Figure 4: Increases in Effort Over Time by 1972 Effort Cohorts

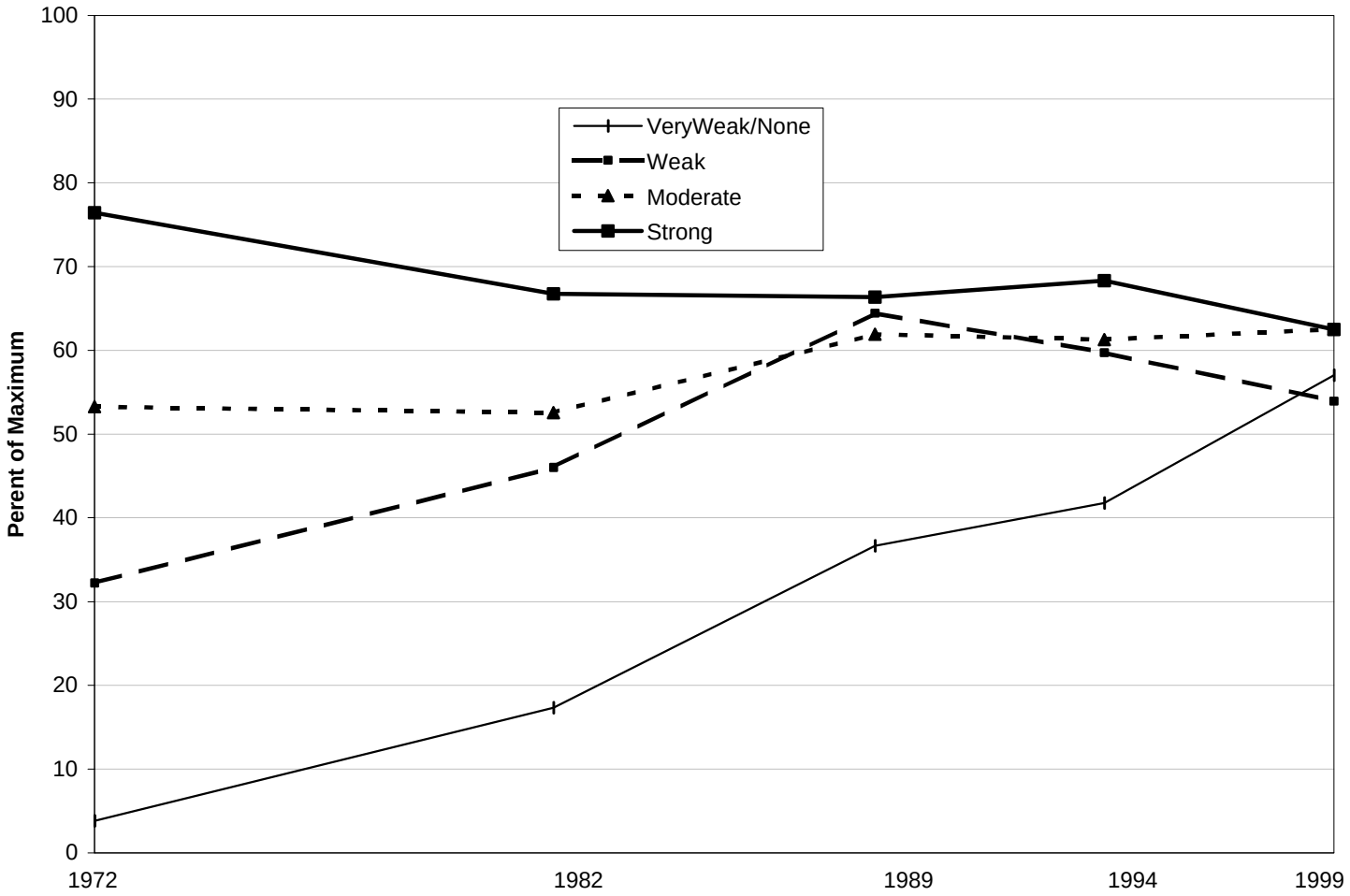


Figure 5. Program effort scores, by component, according to region for 1982, 1989, 1994 and 1999

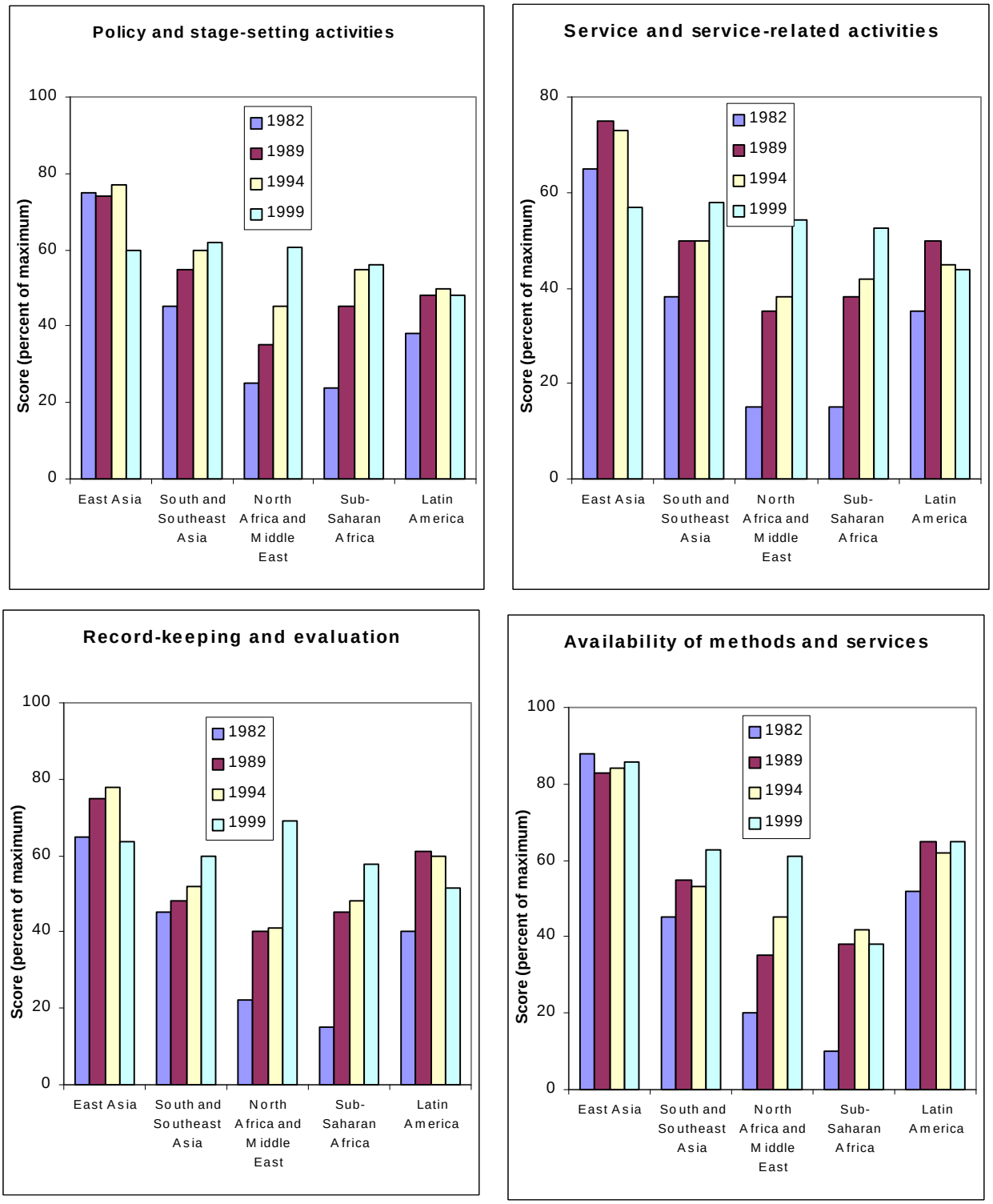
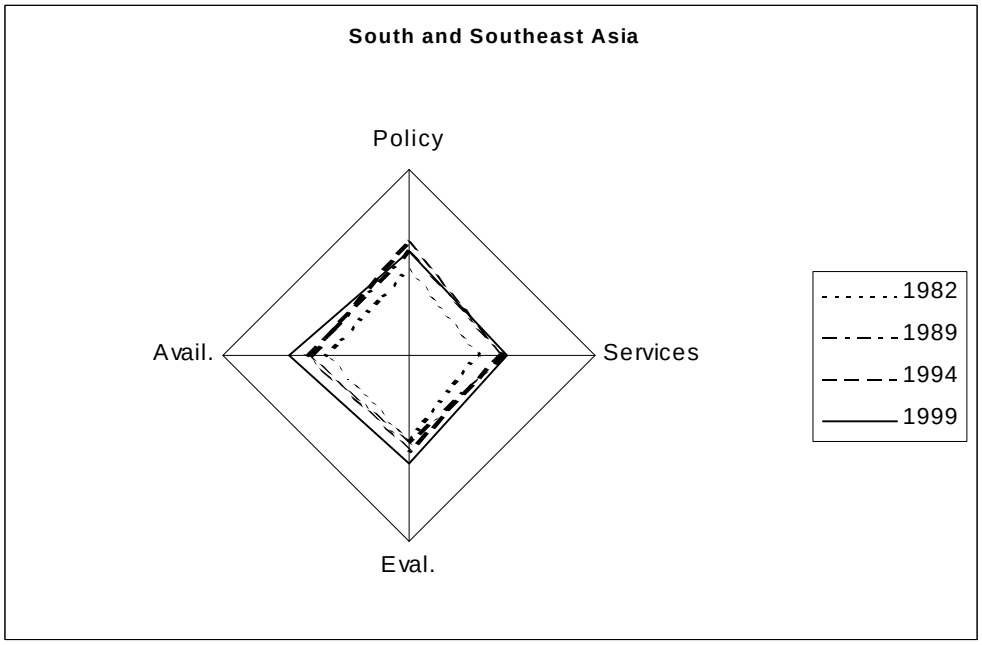
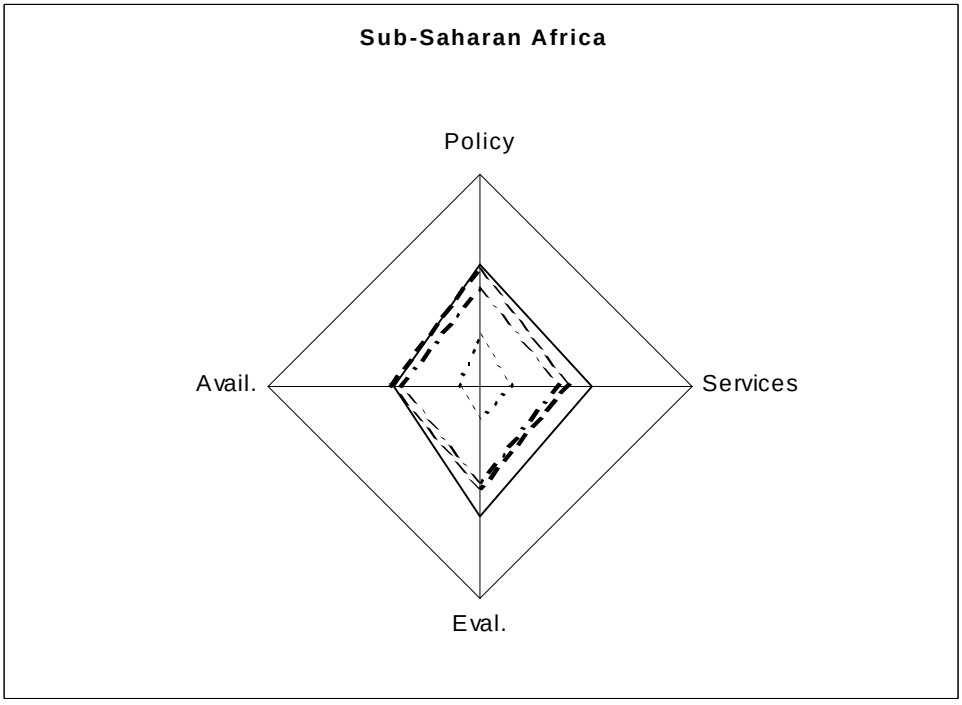
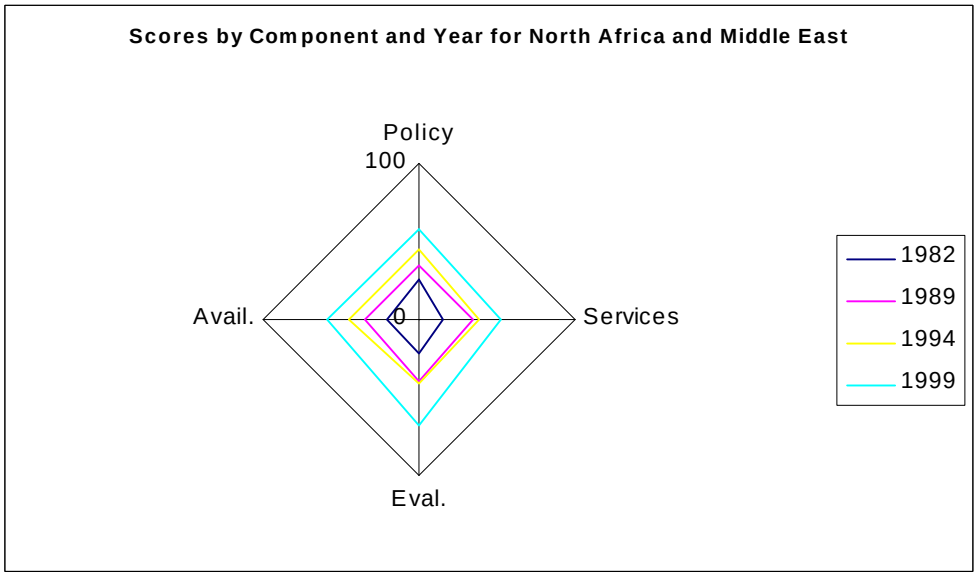
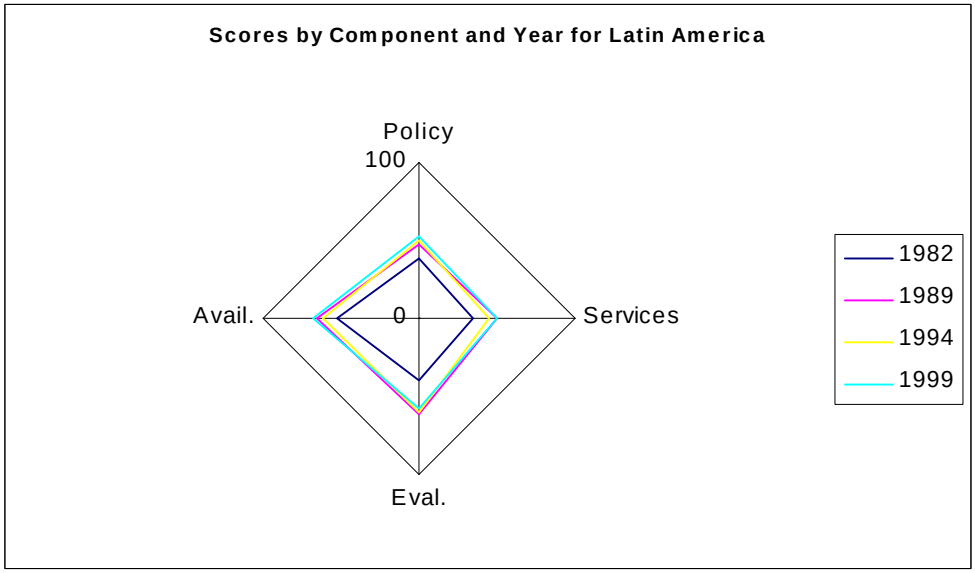


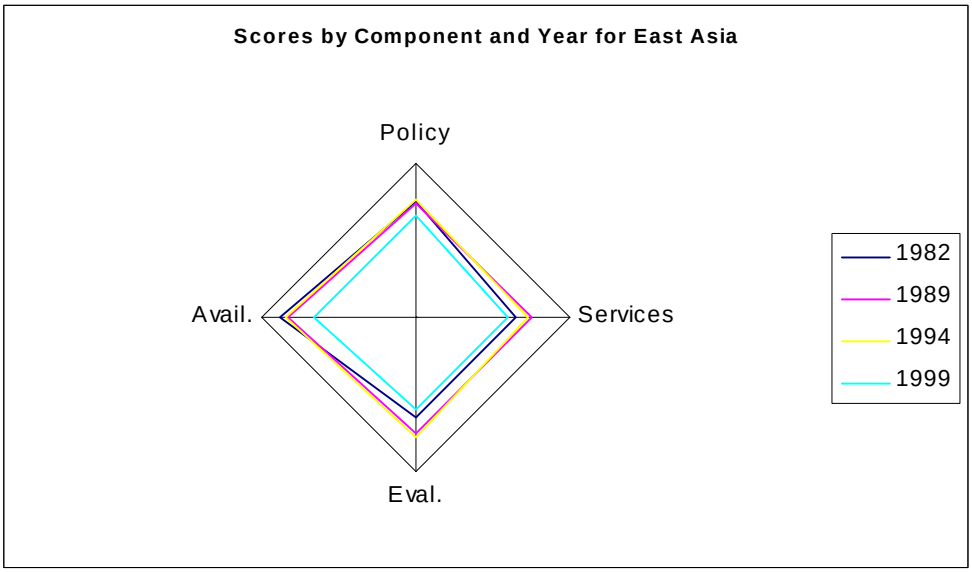
Figure 6. Scores by Component and Year






Scores by Component and Year for North Africa and Middle East
Policy
100
Avail.
0
Services
Eval.
1982
1989
1994
1999


Scores by Component and Year for Latin America
Policy
100
Avail.
0
Services
Eval.
1982
1989
1994
1999


Scores by Component and Year for East Asia
Policy
Avail.
Services
Eval.
1982
1989
1994
1999

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FOOTNOTES

(1) An exception is that the budget item was modified in the 1999 cycle, reducing it to a single question that asked for the respondent's own estimate for the separate proportions of program funding that derived from donor and local sources. Previously the estimates came from a complex table asking for funding amounts in highly detailed categories.

(2) Technically, India dropped from the "strong" category in 1994 to "moderate" in 1999, but since its score only dropped from 68 to 65, we have left it in the "strong" category for this analysis.

(3) The regression equation with standardized coefficients is PREV = -24.45 + 0.65 x SES + 0.38 x FPE where PREV is contraceptive prevalence in the most recent year available, SES is social and economic setting as measured by the average rank in the seven component indexes and FPE is the average of the 1994 and 1999 family planning effort scores expressed as a percentage of maximum. There are 79 observations. The adjusted R-square is 0.73. All coefficients are significant, with t-scores of –4.2, 11.7 and 6.3 respectively.

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"Adolescents." Lindsay Stewart and Erin Eckert.
"Breastfeeding." Chloe O'Gara, Martha Holley Newsome, and Claire Viadro.
"Safe Pregnancy." Marge Koblinsky, Katie McLaurin, Pauline Russell-Brown, and Pamina Gorbach.
"STD/HIV." Gina Dallabetta and Susan Hassig.
"Women's Nutrition." Rae Galloway and Allison Cohn.

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Appendix A

Summary description of the 30 items included in the family planning program effort scale

1. Policy and stage-setting activities

1 *Government's official policy or position concerning fertility family planning and rates of population growth*
Existence and type of official policy: to reduce the population growth rate, to support family planning activities for other than demographic reasons, to allow private and/ or commercial family planning activities in the absence of government-sponsored activity, or to discourage family planning services.
2 *Favorable statements by leaders*
Whether the head of the government speaks publicly and favorably about family planning at least once or twice a year, and whether other officials also do so.
3 *Level of family planning program leadership*
Level of the post (person appointed) to direct the national government family planning program, and whether or not the program director reports to the highest level of government.
4 *Age-at-marriage policy*
Minimum legal age at marriage for females at least 18 years (higher scores for minimum legal ages of 19 and 20+), and the extent of effort to enforce any changes in the law since 1960 regarding legal age at marriage for females. (The score for the latter component is allowed only if the new legal minimum is at least 18.)
5 *Import laws and legal regulations regarding contraceptives*
Extent to which import laws and legal regulations facilitate the importation of contraceptive supplies that are not manufactured locally, or the extent to which contraceptives are manufactured within the country.
6 *Advertising of contraceptives in the mass media allowed*
Whether the advertising of contraceptives in the mass media is allowed with no restrictions, whether there are weak restrictions, whether there are social restrictions, or whether there are strong restrictions.
7 *Other ministries/government agencies involved*
Aside from the ministry or government agency that has primary responsibility for delivering family planning supplies and services, the extent to which other ministries and governmental agencies assist with family planning and/or other population activities. This involvement or assistance may be provided through the public sector or through private-sector family planning programs or population activities, and is classified as follows: assistance with the delivery of family planning supplies and services, assistance in the form of services particular to that ministry, assistance with family planning information and education in specific ways, membership on a council for family planning that meets at least twice annually, moral support and small miscellaneous assistance, no assistance.
8. *In-country budget for program*
Percentage of the total family planning/population budget available from in-country sources. A top score is given if in-country sources provide 85 percent or more of the budget; no score is given if these sources provide less than 50 percent of the budget.

II. Service and service-related activities

9 *Involvement of private-sector agencies and groups*
Extent to which private-sector agencies and groups assist with family planning or other population activities. These groups include family planning associations, and so on. The

involvement or assistance with family planning and population activities may include the following: delivery of family planning supplies and services, training, family planning information and education, membership in a family planning interagency group that meets at least twice annually, moral support, or other types of assistance.

10 *Civil bureaucracy used*

Use of the civil bureaucracy of the government to ensure that program directives are carried out, and the extent to which the senior government administrator at the following levels feels responsible for the success of the program: central government level, provincial or state levels, district/governorate/regency/etc. levels, county levels.

11 *Community-based distribution (CBD)*

Proportion of the country covered by CBD programs for the distribution of contraceptives in areas not easily served by clinics or other service points. Public and/or private CBD systems are included. The essential feature of CBD is that the contraceptive supplies are available upon request within the village, local community, or local residence neighborhood. CBD programs are assumed to be primarily rural; however, a partial extra score is allowed for urban CBD programs.

12 *Social marketing*

Proportion of the country covered by a social marketing program, that is, subsidized contraceptive sales in the commercial sector. The essential feature of social marketing is that contraceptives are sold at low cost, i.e., a (heavily) subsidized price, through channels easily available to rural or urban residents, such as local shops, pharmacies, or specially created local sales outlets. Some forms of social marketing are called commercial retail sales (CRS) programs. Social marketing programs are assumed to be primarily urban programs; however, an extra score is allowed for rural programs.

13 *Postpartum programs*

Extent of coverage of new mothers by postpartum programs, which may be hospital or field-based. Most programs are field-based. (1) For hospital-based programs, the score is constructed from the proportion of deliveries in hospitals and maternity centers for which the new mothers are provided a family planning information and education service (by trained female workers), and the proportion of all deliveries in the country that take place in hospitals and maternity centers (often a small proportion); (2) For field-based postpartum programs, the score is constructed from the proportion of women who deliver at home and are offered a family planning information and education service by trained fieldworkers.

14 *Home-visiting workers*

Proportion of the population covered by a group of workers whose primary task is to visit women in their homes (at least in the rural areas) to talk about family planning and child care. Account is taken of the population that must be covered by each fieldworker; the score for the proportion of the country covered by fieldworkers is deflated if the average population covered by each home visiting worker is more than 15,000.

15 *Administrative structure*

Whether there is adequate administrative structure and staff at three levels (national, provincial, and county). *Adequate* means that the administrative structure is sufficient to ensure that plans developed for each level are carried out, that the administrative structure is capable of recognizing and solving problems that cause low performance, and that the administrative structure is able and willing to use existing resources or to call upon higher administrative levels in obtaining resources needed to carry out plans for the delivery of family planning supplies and services.

16 *Training programs*

Whether there is an adequate training program for each category of staff in the family planning program: administrative staff, physicians, nurses, paraprofessionals, village-level distributors, fieldworkers/motivators, staff in other ministries and organizations, others. *Adequate* means that the training provides personnel with the knowledge, information, and skills necessary to carry out

their jobs effectively, and that facilities exist to carry out the training. The score is determined by the extent to which the training program, for each category of staff, is very good, moderately good, mediocre or poor, or nonexistent.

17 *Personnel carry out assigned tasks*

Extent to which each category of family planning program staff carries out assigned tasks (task implementation): administrative staff, physicians, nurses, paraprofessionals, village-level distributors, fieldworkers/ motivators, staff in other ministries and organizations, others. The score is determined on the basis of the extent to which each category of staff carries out assigned tasks very well, moderately well, or poorly.

18 *Logistics and transport*

Extent to which the logistics and transportation systems are sufficient to keep stocks of contraceptive supplies and related equipment available at all service points at all times, at the following levels: central, provincial, county. The score is based on the availability of supplies and equipment: all or almost all of the time, about half to three-quarters of the time, sometimes, or seldom or never.

19 *Supervision*

Whether there is an adequate system of supervision at all *levels. Adequate* means that: (a) supervisors exist at all levels of program operations in sufficient numbers to make possible supervisory visits at least once a month at service delivery levels (and quarterly at higher administrative levels); (b) supervisors in fact make such supervisory visits to the work sites of the persons supervised; (c) during these supervisory visits, encouragement, advice, and support are provided to supervised workers, in addition to any necessary checking of operations and records that assist in the evaluation of worker performance; and (d) supervisors carry through on providing/obtaining supplies and services identified as needed during their visits (or at least make serious attempts to obtain these needed supplies and services).

20 *Mass media for information, education, and communications (IEC)*

Frequency of mass media messages that provide family planning information, including where family planning services are available, and how much of the country is covered by various types of mass media: newspapers, magazines, radio, television, mobile TEC units (films, etc.), billboards and other outdoor media (buses, etc.), traditional types (puppet shows, folk dances, local theater, etc.), other types. The frequency classifications include: at least once a month, sometimes (about once every 3-6 months), infrequently (about once a year or less often), never.

21 *Incentive/disincentives*

Use of monetary or other incentives for the adoption of family planning. The incentives may be provided to: clients, recruiters, service personnel (including CBD personnel), communities. The disincentives may refer to individuals or to communities, and include regulations or constraints designed to encourage family planning or small family size.

III. Evaluation and record keeping

22. *Record keeping*

Whether or not there are record-keeping systems for family planning clients at the clinic level, plus a system for the collection and periodic reporting of summary statistics at regional and national levels (that is, numbers of acceptors, supplies distributed, numbers of workers, and so on), and whether or not there is feedback to each reporting unit from regional or national units. The scoring takes into account the existence of good systems as well as their implementation. *Feedback* refers to reporting back to lower-level units on a regular basis, with progress measured against some standard, such as acceptance or prevalence targets or trends.

23 *Evaluation*
Whether or not some or all of the following exist (partial score given for each): regular estimation of prevalence levels and trends (annually or quarterly) using program statistics and estimated continuation rates; measurement every two to four years of family planning prevalence levels and trends using data collection methods that are independent from program statistics (such as contraceptive prevalence studies); implementation of operations research studies designed to help program management understand the program, its problems, and potential improvements; professional staff in an evaluation unit who prepare technically correct periodic reports on the program, what it has achieved, etc.; professional staff who interpret and summarize, for program management, national and regional population data collected through censuses, vital registration systems, and surveys (these staff may be directly associated with the program or with other institutions); good coordination, working relationships, and timely sharing of information between the evaluation unit and other units in family planning programs. Partial score is also given for the existence of universities or research institutes in the country that carry out demographic research, family planning research, or population research of other kinds.
24 *Management use of evaluation findings*
Extent to which the program managers (decision makers) use the research and evaluation findings to improve the program in ways suggested by those findings.

IV. Availability and accessibility of fertility control methods

25 *Male sterilization*
Whether or not medically adequate voluntary sterilization services for males are legally and openly available, and the percentage of the population that has ready and easy access to such services.
26 *Female sterilization*
Whether or not medically adequate voluntary sterilization services for females are legally and openly available, and the percentage of the population that has ready and easy access to such services.
27 *Pills and injectables*
Percentage of couples of reproductive age who have ready and easy access to pills through programs other than CBD and social marketing programs. *Ready and easy access means* that the recipient spends no more than an average of two hours per month to obtain contraceptive supplies and services. Easy access also implies that the cost of contraceptive supplies is not burdensome, i.e., to meet this criterion, a one-month supply of contraceptives should cost less than 1 percent of a month's wages. (If the availability of injectables is higher than that of pills, the data on injectables were used to score this item.)
28 *Condoms, spermicides*
Percentage of couples of reproductive age who have ready and easy access to condoms, through programs other than CBD and social marketing programs. *Ready and easy access* is defined as in item 27, above. (If the availability of other conventional contraceptives is greater than that of condoms, the data on those other methods were used to score this item.)
29 *IUDs*
Percentage of couples of reproductive age who have ready and easy access to IUDs through programs other than CBD and social marketing programs. *Ready and easy access* is defined as in item 27.
30 *Abortion, menstrual regulation*
Proportion of the population that has ready and easy access to abortion services, whether or not abortions are legal, but excluded in the scoring is the availability of abortions carried out only under poor conditions.

Appendix B

Appendix B. Program-Effort Scores as Percentage of Maximum by Region, in 1972, 1982, 1989, 1994, 1999						
Region/country		**1972**	**1982**	**1989**	**1994**	**1999**
East Asia						
	China	83	84	87	92	86
	Korea, PDR	0	50	54	63	
	Korea, Rep	80	79	81	71	55
	Mongolia	0	0		38	38
	Taiwan	80	79	81	78	79
Average		49	58	76	68	64
South and Southeast Asia						
	Afghanistan	10	11	36		
	Bangladesh	10	57	72	69	74
	Bhutan	0		22	36	
	Cambodia	0	0	9	26	46
	Fiji		50			
	Hong Kong	77	69		61	57
	India	63	66	72	68	65
	Indonesia	47	75	80	83	82
	Laos	0	0	8	28	39
	Malaysia	60	51	66	54	69
	Myanmar	0	4	12	27	37
	Nepal	20	37	59	51	57
	Pakistan	27	40	48	48	57
	Papua New Guinea	0	26	26	28	
	Philippines	53	56	49	60	57
	Singapore	87	79	63	63	44
	Sri Lanka	40	67	80	69	69
	Thailand	37	61	80	75	75
	Vietnam	67	53	68	67	76
Average		33	45	50	54	60
North Africa and Middle East						
	Algeria	10	25	46	44	68
	Cyprus		25			
	Egypt	27	40	66	59	57
	Iran	47	11	57	61	71
	Iraq	0	3	1	38	
	Jordan	0	16	31	40	47
	Kuwait	0	5		23	
	Lebanon	0	33	49	33	60
	Morocco	13	35	57	63	57
	Oman		1	5	45	53
	Saudi Arabia	0	1		5	
	Syria	0	11	44	48	66

Appendix B. Program-Effort Scores as Percentage of Maximum by Region, in 1972, 1982, 1989, 1994, 1999						
Region/country		**1972**	**1982**	**1989**	**1994**	**1999**
	Tunisia	40	59	69	82	71
	Turkey	20	29	46	54	59
	United Arab Emirates		1	33	14	
	Yemen	0	10	28	30	37
Average		12	19	41	43	59
Anglophone Africa						
	Angola	0		39	24	
	Botswana		27	75	66	
	Ethiopia	0	6	32	38	44
	Gambia		26			
	Ghana	10	18	52	53	63
	Guinea-Bissau		14	28	36	
	Kenya	20	28	58	56	62
	Lesotho	0	14	45	43	62
	Liberia	10	22	3		
	Malawi	0	6	16	44	50
	Mauritius	67	68	69	74	71
	Mozambique	0	16	27	33	43
	Namibia			11	43	54
	Nigeria	7	13	43	42	45
	Sierra Leone	0	16	35	47	
	Somalia	0	10	1		
	South Africa			62	56	54
	Sudan	10	8	20	29	35
	Tanzania	10	22	42	48	55
	Uganda	0	17	12	44	54
	Zambia	0	16	49	41	50
	Zimbabwe	10	27	56	68	61
Average		8	20	37	46	54
Francophone Africa						
	Benin	10	11	28	38	45
	Burkina Faso	0	4	45		54
	Cameroon	0	8	34	49	44
	Central African Rep	0	10	42	40	50
	Chad	0	7	20	27	43
	Congo	0	15	36	28	35
	Cote d'Ivoire	0	6	55	38	50
	Gabon					35
	Guinea	0	5	40	50	60
	Madagascar	0	9	40	33	42
	Mali	0	11	38	45	58
	Mauritania	0	4	21	32	37
	Niger	0	5	38	46	47
	Rwanda	0	23	43		62

Appendix B. Program-Effort Scores as Percentage of Maximum by Region, in 1972, 1982, 1989, 1994, 1999						
Region/country		**1972**	**1982**	**1989**	**1994**	**1999**
	Senegal	0	23	44	51	55
	Togo	0	14	30		63
	Zaire	10	13	28		
Average		1	10	36	40	49
Latin America						
	Argentina			21	21	30
	Bolivia	0	8	23	49	49
	Brazil	0	43	32	43	59
	Chile	53	44	58	55	61
	Colombia	53	71	62	66	64
	Costa Rica	70	33	16	46	32
	Cuba	50	52	65	54	
	Dominican Republic	47	55	54	67	50
	Ecuador	20	35	58	53	46
	El Salvador	43	63	68	58	46
	Guatemala	30	28	53	58	37
	Guyana	0	26	55	26	46
	Haiti	10	36	42	38	51
	Honduras	23	25	63	51	44
	Jamaica	77	56	66	65	62
	Mexico	13	66	77	74	75
	Nicaragua	0	20		53	49
	Panama	63	51	52	56	49
	Paraguay	10	8	36	35	56
	Peru	0	22	51	59	59
	Puerto Rico				53	62
	Trinidad & Tobago	50	47	66	50	59
	Uruguay			42	39	34
	Venezuela	23	31	54	38	29
Average		30	39	51	50	50
Central Asian Republics						
	Kazakstan				34	42
	Kyrgyzstan				36	49
	Tajikistan					54
	Turkmenistan				33	59
	Uzbekistan				54	55
Average					39	52
Overall average		20	29	45	48	54